REMARKS

Reconsideration of this application is respectfully requested.

Claims 1, 13, 19 and 26 have been amended, claims 11 and 31 have been deleted, and new claims 32-36 have been added. Upon entry of these amendments, the pending claims will be claims 1-7, 9, 10, 12-30, 32-36.

Claims 1 and 26 have been amended to recite that the film is a shrinkable in both the machine direction (MD) and the transverse direction (TD). Support for this amendment may be found in the present specification at page 1, lines 29-33, wherein it is indicated that the film can be used for packaging items such as cassette tapes, CD cases and tobacco boxes at high speed. It is well known in the art that such packaging films are capable of shrinking in both the MD and the TD.

Further support for the amendment, reciting two way shrinkage in claims 1 and 26, may be found in the present specification at page 2, lines 15-32, as well as in the Examples on pages 9-12 of the present specification. For example, in the Table on page 11 of the present specification, it is indicated that the film of roll no. 2 shrank by 9.7% in the machine direction and 24% in the transverse direction, when heated in an oven at 275°F (135°C).

Recitations from claim 31 have also been inserted into claims 1 and 26, and claim 31 has been deleted. Recitations from claim 11 have also been inserted into claim 1 and claim 11 has been deleted.

In view of the deletion of claim 11, the dependency of claim 13 has been revised.

Claim 19 has been amended to more particularly recite the order of steps, wherein the coextruded film of step (a) is stretched in the MD in step (b) and the MD stretched film of step (b) is stretched in the TD in step (c). Recitations regarding the MD stretch temperature of 105°C or less have also been deleted from claim 26 and inserted into claim 19.

The dependency of claim 26 has been changed.

New claim 32 includes recitations from deleted claim 11 and is dependent from claim 19.

New claim 33 includes recitations from claim 13 and is dependent from claim 32.

New claim 34 includes recitations of claim 26, as amended herein, except that claim 34 recites that the film has greater than 17.7% overall area reduction shrinkage at 135°C, rather than

the 20% or greater value recited in claim 26. Support for this recitation of 17.7% may be found in the present specification at page 11. In particular, roll no. 9 in the Table shows 7% oven shrink in the md (machine direction) at 275°F (135°C), and 10.7% oven shrink in the td (transverse direction) at 275°F (135°C). These values of 7% and 10.7% total as 17.7% overall shrinkage. The overall shrinkage shown for roll nos. 2-8 are all greater than 17.7% at 275°F (135°C).

New claim 35 includes recitations of claim 27, except that claim 35 recites that the temperature of the TD stretch is 141°C or below, rather than the below 145°C as recited in claim 27. Support for this recitation of 141°C may be found in the present specification at page 9 in the second line from the bottom, wherein the TD stretch temperatures of Examples is recited as being 141°C.

Support for new claim 36 may be found in the present specification at page 11. In particular, roll no. 3 in the Table shows 8% oven shrink in the md (machine direction) at 275°F (135°C), and 23% oven shrink in the td (transverse direction) at 275°F (135°C). These values of 8% and 23% total as 31% overall shrinkage. The overall shrinkage shown for roll no. 2 is greater than 31% at 275°F (135°C).

For the reasons given on pages 2 and 3 of the Official Action, claims 1-10, 13-28, 30 and 31 are rejected under 35 USC 102(b) over the disclosure of the Dries et al U.S. Patent 5,529,843.

This rejection is respectfully traversed.

The rejection of film claims 1-10 and 13-18 over the Dries patent has been obviated by the foregoing amendments, whereby recitations of claim 11 have been incorporated into claim 1.

Method claims 19-28 and 30 are not anticipated by the Dries patent, particularly in view of the recitation of claim 19 reciting a machine direction stretching temperature of 105°C or less. At column 9, lines 7-11, of the Dries patent it is stated that the longitudinal stretching temperature may be less than 140°C, preferably in the range from 125°C to 135°C.

The Dries patent does not suggest a shrink film in the manner in which one of ordinary skill in the art would use the term "shrink film". The Dries patent especially does not suggest greater than 20% overall area reduction in shrinkage at 135°C, as recited in the present claims 1 and 26.

Accordingly, the rejection under 35 USC 102 should be withdrawn.

For the reasons given on pages 4-5 of the Official Action, claims 1-11, 13-22 and 29-31 are rejected under 35 USC 103(a) over the disclosure of the Bossaert et al U.S. Patent 4,921,746 in view of the disclosure of the Blemberg U.S. Patent 5,108,844.

This rejection is respectfully traversed.

It is not obvious to combine the disclosure of the Bossaert patent with the disclosure of the Blemberg patent in the manner suggested in the Official Action to arrive at an embodiment of any of the present claims.

The Blemberg patent teaches that the composition of a core layer may be modified to impart the ability of the core layer to stick to an adjacent coextruded layer. See the Abstract.

There is no suggestion in the Bossaert patent that there is any problem with the core layer sticking to an adjacent coextruded layer. Therefore, there in no motivation for one to look to the teachings of the Blemberg patent to modify the disclosure of the Bossaert patent.

Neither the Bossaert patent nor the Blemberg patent suggest a shrink film in the manner in which one of ordinary skill in the art would use the term "shrink film". In particular, neither of these patents suggest greater than 20% overall area reduction in shrinkage at 135°C, as recited in the present claims 1 and 26.

The remarks on page 5 of the Official Action in connection with claim 31 should not refer to "Peet", because the Peet patent (US 6,270,912) was disqualified as a reference in the response to the previous Official Action.

Neither the Bossaert patent nor the Blemberg patent suggest the type of orientation of a film as recited in the present claim 19.

For the reasons given on pages 5-8 of the Official Action, claims 1-11, 13-21, 23-26, 30 and 31 are rejected under 35 USC 103(a) over the disclosure of the Schuhmann et al U.S. Patent 5,433,983 in view of the disclosure of the Blemberg U.S. Patent 5,108,844.

This rejection is respectfully traversed.

It is not obvious to combine the disclosure of the Schuhmann patent with the disclosure of the Blemberg patent in the manner suggested in the Official Action to arrive at an embodiment of any of the present claims.

The Blemberg patent teaches that the composition of a core layer may be modified to impart the ability of the core layer to stick to an adjacent coextruded layer. See the Abstract.

There is no suggestion in the Schuhmann patent that there is any problem with the core layer sticking to an adjacent coextruded layer. Therefore, there in no motivation for one to look to the teachings of the Blemberg patent to modify the disclosure of the Schuhmann patent.

In the Abstract and in column 1, lines 12-18, the Schuhmann patent describes the films disclosed therein as having low shrink values.

At column 5, lines 5-10, the Schuhmann patents suggests that the longitudinal stretching temperature should be between about 100 and 130°C, preferably between about 105 and 120°C. The embodiments of the present claims 27 and 28 are particularly distinguished from the disclosure of the Schuhmann patent.

For the reasons given on pages 8 and 9 of the Official Action, claims 1-7, 9-24, 26, 27 and 29-31 are rejected under 35 USC 103(a) over the disclosure of the Keller et al U.S. Patent No. 5,691,043, in view of the disclosure of the Peiffer et al U.S. Patent 5,451,455.

This rejection is respectfully traversed.

It is not obvious to combine the teachings of the Keller patent with the teachings of the Peiffer patent.

At column 3, lines 39-44 of the Peiffer patent, it is taught that the addition of resin to the base layer makes the film brittle. This passage further states brittleness is a desirable property for twist wrapping.

The films of the Keller patent are not designed for twist wrapping. The films of the Keller patent are designed to be used as uniaxially heat shrinkable films. See the Abstract. An example of such a use is for labeling bottles. See column 1, lines 54-61.

There is no suggestion in the Keller patent that it would be desirable to make uniaxially heat shrinkable films described therein more brittle. Therefore, one would not be motivated to look to the disclosure of Peiffer for making twist wrap films more brittle to modify the disclosure of the Keller patent.

The films of the present film claims 1-18, 29 and 30 are biaxially oriented so as to be shrinkable in both the machine direction and the transverse direction. This feature distinguishes these claims from the disclosures of the Keller patent and the Peiffer patent.

The Keller patent teaches a film, which is uniaxially (not biaxially) shrinkable. See column 1, line 51 to column 2, line 10; column 2, lines 56-61; and column 3, lines 39-49.

The Peiffer patent teaches that shrinkability of the films described therein is an undesired property. See Comparative Example 1 on column 7, lines 1-7.

Neither the Keller patent nor the Peiffer patent teaches embodiments of the present method claims 19-28, 32 and 33, wherein the film is subjected to an MD stretch at a temperature of 105°C or less before the film is stretched in the transverse direction (TD).

Accordingly, the rejections under 35 USC 103 should be withdrawn.

Allowance is requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Amend claims 1, 13, 19 and 26, cancel claims 11 and 31, and add new claims 32-36 as follows:

1. (Twice Amended) A multi-layer polymeric shrink film comprising:

(a) a first skin layer having a first side and a second side, wherein the first skin layer comprises a polymer selected from the group consisting of ethylene-propylene random copolymers, ethylene-propylene-butene random terpolymers, propylene-butene copolymers, and low density polyethylene;

(b) a core layer comprising polypropylene, a polymeric modifier, and a hydrocarbon resin wherein the core layer has a first side and a second side and the first side of the core layer is adjacent to the second side of the first skin layer; and

(c) a second skin layer having a first side and a second side wherein the first side of the second skin layer is adjacent to the second side of the core layer,

wherein the core layer comprises up to about 15 percent weight of the polymeric modifier and up to about 15 percent by weight of the hydrocarbon resin, wherein said film is biaxially oriented so as to be shrinkable in both the machine direction (MD) and the transverse direction (TD), and wherein said film has greater than 20% overall area reduction shrinkage at 135°C.

Cancel claim 11.

13. (Twice Amended) The film of claim 1 [11] wherein the second skin layer comprises a polymer selected from the group consisting of ethylene-propylene random copolymers, ethylene-propylene-butene random terpolymers, propylene-butene copolymers, and polyethylene.

19. (Twice Amended) A method for manufacturing a multi-layer polymeric shrink film comprising the steps of

(a) coextruding a first skin layer comprising a polymer, a core layer comprising polypropylene, a polymeric modifier, and a hydrocarbon resin, and a second skin layer comprising a polymer;

(b) stretching the film of step (a) in the machine direction (MD) at a temperature of 105°C or less; and

(c) stretching the film of step (b) in the transverse direction (TD),

wherein the core layer comprises up to about 15 percent weight of the polymeric modifier and up to about 15 percent by weight of the hydrocarbon resin.

26. (Amended) The method of claim [19] 21, wherein [step (b) comprises stretching the film in the machine direction (MD) at a temperature of 105°C or less] said film is biaxially oriented so as to be shrinkable in both the machine direction (MD) and the transverse direction (TD), and wherein said film has greater than 20% overall area reduction shrinkage at 135°C.

Cancel claim 31.

New claims 32-36 have been added.